

Pre weaning mortality in Angora rabbits

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Angora rabbit wool is softer, silky and finer and is eight times warmer than sheep wool (Pokharna *et al.* 2004). A high incidence of mortality was reported litter size 6 and above, and percentage was lower in litters of 5 and less (Bhasin and Singh 1995). The production efficiency of Angora rabbit is largely determined by litter size and pre- weaning mortality. The pre- weaning mortality ranging from 15.39 to 65.76% were reported in pure White Giant, New Zealand White, Grey Giant and Soviet Chinchilla rabbits (Gupta 1987) whereas 8.08% to 17.92% pre weaning mortality was reported in Russian, British and British × Russian Angora rabbits (Singh 1987).

In the present study an attempt was made to determine the effect of various non-genetic factors on the pre weaning mortality of young rabbits, based on the data collected at the Rabbit Production Unit of ICAR Research Complex for NEH-region, Sikkim Centre, Tadong.

The pre-weaning mortality incidence was studied in 208 kits born alive in 45 litters at this Rabbit Production Unit. Each year was sub divided into 2 seasons of birth namely rainy (March to October) and winter (November to February). All the rabbits were maintained under standard conditions of management and feeding with strict surveillance for possible health hazards during all the times. The concentrate mixture was composed of crushed maize 45%, wheat bran 20%, mustard oil cake 17%, black gram 16% mineral mixture 1%, common salt 1% and vitamin AD₃ 0.05%. The half quantity of the concentrate mixture was offered in the morning at 9.30 AM and half in the evening at 3.30 PM. The seasonal green fodder (*Avina sativa* and *Vigna umbellata*) and tree leaves (*Ficus hookerii*) also offered in noon to reduce feed cost. Freshwater was made available all the time in a separate container. The pregnant does were shifted to kindling cages 26 day post mating after being tested positive for pregnancy by abdominal palpation. Weaning was routinely done at 6 weeks of age. The least square analysis of variance (Harvey 1990) was used to find out the effect of various

factors on pre weaning mortality

The overall pre-weaning mortality was 36.54% out of 208 young born in 45 litters. These findings are in close agreement with the findings of Sharma *et al.* (1996). The highest pre-weaning mortality was recorded in March (11.06%) followed by January (7.69%) and February (5.77%). Highest pre-weaning mortality in the March and February was also reported by Jain *et al.* (1997). Relatively higher temperature variation during these months leads to higher incidence of respiratory infections causing higher pre weaning mortality. Pre-weaning mortality in rabbits due to insufficient milk or starvation had been estimated to be 11.7–12% reported by Rashwan and Marai (2000). Similarly, parity up to sixth litter did not have any effect on in rabbits (Gualterio *et al.* 1998). The pre-weaning mortality from birth to 42 days of age was 13% in first parity, 2.8% in second parity and 6.43% in third parity in Angora rabbit (Singh *et al.* 2004). Pattern of mortality in Angora rabbits was reported from a high altitude area and the major causes of death in kits are diarrhea/enteritis (32.63%) followed by coccidiosis (17.54%) and pneumonia (14.04%) (Ramakrishna *et al.* 2004).

The records of season wise pre-weaning mortality revealed that season did not show any significant influences on pre-weaning mortality. However it was highest in winter (52.63%), whereas Samber *et al.* (1998) reported the highest pre-weaning mortality in summer season. In contrast to the above findings (Rathore *et al.* 1994) reported the highest pre-weaning mortality in rainy season. Relatively higher temperature variation and adverse climate condition in the surrounding area could be the possible reason for high pre-weaning mortality in Angora rabbits in winter. The highest pre-weaning mortality encountered in summer might be due to the change in environmental temperature, humidity and sudden stormy weather leading to stress to the animals, which are in close agreement with observation of (Rai *et al.* 1986).

SUMMARY

The present study was under taken to determine the effect of non-genetic factors on pre- weaning mortality in Angora rabbits. The analysis of variance revealed that the year of

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birth was a significant source of variation for pre weaning mortality. The season of birth had no significant effect on pre-weaning mortality in Angora rabbits.

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